PATENT
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

JUSTER et al.

Application No. 09/461,487 Group Art Unit: 2155

Filed: December 14, 1999 Examiner: LaForgia, Christian A.

For: NON-DELEGABLE CLIENT REQUEST TO SERVERS STORING LOCAL INFORMATION ONLY

PENDING CLAIMS AFTER AMENDMENTS MADE IN RESPONSE TO OFFICE ACTION DATED DECEMBER 18, 2002

1. A computer-implemented method comprising:

sending a request from a client to a server of a list of servers;

determining at the server whether the server is inappropriate to fulfill the request;

upon determining that the server is inappropriate to fulfill the request,

sending an error message from the server to the client that the server is off-line; and,

upon receiving the error message at the client, automatically repeating the sending of the request to a next server of the list until the error message is not received.

2. The method of claim 1, wherein sending a request from a client to a server comprises generating the request at a queue manager of the client.

3. The method of claim 2, wherein sending a request from a client to a server further comprises receiving the request from the queue manager at an application programming interface (API) of the client.

4. The method of claim 3, wherein sending a request from a client to a server further comprises receiving the request from the API at a component of the client that maintains the list of servers.

5. The method of claim 4, wherein sending a request from a client to a server further comprises sending the request using a remote procedure call of the client.

6. A machine-readable medium having instructions stored thereon for execution by a processor of a client to perform a method comprising:

sending a request to a server of a list of servers;

receiving a response to the request from the server; and

upon determining that the response comprises an error message that the server is off-line, as used by the server when the server is inappropriate to fulfill the request, automatically repeating the sending of the request to a next server of the list until the error message is not received.

7. The method of claim 6, wherein sending a request to a server comprises generating the request at a queue manager of the client.

8. The medium of claim 7, wherein sending a request to a server further comprises receiving the request from the queue manager at an application programming interface (API) of the client.

9. The medium of claim 8, wherein sending a request to a server further comprises receiving the request from the API at a component of the client that maintains the list of servers.

10. The medium of claim 9, wherein sending a request to a server further comprises sending the request using a remote procedure call of the client.

11. A computerized system comprising:

a plurality of servers, each server designed to send an error message that the server is off-line in response to receiving a request the server is unable to fulfill locally and received from a client of a predetermined type; and

a client of the predetermined type and designed to automatically repeat the sending of a request to a different one of the plurality of servers until the error message is not received in response.

12. The system of claim 11, wherein each of the plurality of servers is further designed to delegate to another of the plurality of servers a request the server is unable to fulfill locally and received from a client of a second predetermined type.

13. The system of claim 12, further comprising a second client of the second predetermined type and designed to send a request to one of the plurality of servers.

14. The system of claim 13, wherein the client comprises:

a query manager designed to generate the request;

a directory server component designed to locate a server able to fulfill the request.

15. The system of claim 14, wherein the directory server component comprises:

an application programming interface (API) designed to receive the request from the query manager;

a component designed to maintain a list of servers comprising at least some of the plurality of servers; and,

a remote procedure call designed to send the request from the query manager to one of the list of servers.

16. A client computer comprising:

a communications device; and,

a computer program designed to automatically repeat sending a request to a different server of a list of servers via the communications device until an error message indicating a server receiving the request is off-line is not received.

17. The computer of claim 16, further comprising a processor and a computer-readable medium, such that the computer program is executed by the process from the medium.

18. A machine-readable medium having instructions stored thereon for execution by a processor to transform a general purpose computer to a special purpose computer comprising:

a communications device; and

means for automatically repeating the sending of a request to a different server of a list of servers via the communications device until an error message that the server is off-time as used by the server when the server is inappropriate to fulfill the request is not received in response.

19. A machine-readable medium having instructions stored thereon for execution by a processor of a server to perform a method comprising:

receiving a request from a client;

determining whether the server is inappropriate to fulfill the request;

determining whether the client is of a predetermined type; and,

upon determining that the server is inappropriate to fulfill the request and that the client is a non-delegable client that does not understand a delegation of the request to another server, sending an error message to the client that the server is off-line.

20. The medium of claim 19, the method further comprising:

determining whether the client is of a second predetermined type;

upon determining that the sever is inappropriate to fulfill the request and that the client is of the second predetermined type, delegating the request to another server.

21. The medium of claim 19, the method further comprising upon determining that the server is appropriate to fulfill the request, fulfilling the request.

22. A server computer comprising:

a communications device; and,

a computer program designed to send via the communications device an error message that a server computer is off-line in response to a request from a non-delegable client that does not understand a delegation of the request to another server when the server computer is inappropriate to fulfill the request.

23. The computer of claim 22, wherein the computer program is further designed to delegate the request to another server computer via the communications device in response to a request from a client of a second predetermined type when the server computer is inappropriate to fulfill the request.

24. The computer of claim 22, wherein the computer program is further designed to fulfill the request when the server computer is appropriate to fulfill the request.

25. The computer of claim 22, further comprising a processor and a computer-readable medium, such that the computer program is executed by the processor from the medium.

26. A machine-readable medium having instructions stored thereon for execution by a processor to transform a general purpose computer to a special purpose computer comprising:

a communications device; and,

means for sending via the communications device an error message that a computer is off-line in response to a request from a non-delegable client that does not understand a delegation of the request to another server when the computer is inappropriate to fulfill the request.

27. The medium of claim 26, wherein the means is further for delegating the request to another computer via the communications device in response to a request from a client of a second predetermined type when the computer is inappropriate to fulfill the request.

28. The medium of claim 26, wherein the means is further for fulfilling the request when the computer is appropriate to fulfill the request.

29. The medium of claim 20, wherein the second predetermined type is a delegable client that understands a delegation of the request to another server.